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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,662	11/22/2006	Thomas Giering	GIER3004/JJC	7643
23364 7590 12/02/2009 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
KOSLOW, CAROL M				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
12/02/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,662

Applicant(s)

GIERING ET AL.

Examiner

C. Melissa Koslow

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-10 and 12-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10 and 12-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

This action is in response to applicants' amendment of 28 September 2009. the amendments to the claims have overcome the 35 USC 101 rejection; the 35 USC 112 rejections over the phrase "a coding system" and claims 1, 4, 10, 11 and 21; the obviousness-type double patenting rejections over applications 10/574,663; 10/574,838; 10/575,074; 10/575,078; 10/575,079 and 11/660,809 and the art rejections over U.S. patent 3,473,027 and WO 02/070279. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

Claim 12 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative. See MPEP § 608.01(n).

This claim depend from both claims 1 and 6.

Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amendment to claim is new matter since there is no teaching or suggestion in the originally filed disclosure that at least one of the host lattices is formed by a solid solution.

The originally filed disclosure teaches at least one of the host lattices is formed by a mixed crystal, which applicants argue as meaning a crystal formed of a mixture of materials each of which is capable of crystallization, or in other words, any crystalline material, as stated in the office action dated 29 January 2009 in the copending application 10/574,831. This argued definition is not that of a "solid solution". The references referred to in the arguments do not

show that "mixed crystal" and "solid solution" are the same. Therefore, the amendment to claim 10 is new matter.

Claims 1, 12, 14, 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite as to what it is the actual composition of the claimed composition since lines 2, 3 and 6-14 teaches the composition comprises a luminescent basic substance and at least two luminescent additives, but the limitation in lines 4-5 teaches that the composition is formed of by the absence or presence of the luminescent additive and that the number of additives can be one. Thus the claim contradicts itself as to the required number of additives and the composition. Also the teaching that the composition is formed by the type of luminescent additive indicates any luminescent compound can be utilized as the additive, but lines 8-14 requires the two additives to have overlapping emission ranges, which limits the composition of the additives.

Claims 1, 14 and 15 are indefinite since they state the emission spectrum of the first and second additives are complementary, but they also teach that they overlap. In the phosphor art, the "complementary" means the emissions, which do not overlap, combine to give a white light. For examples yellow and blue are complementary colors since together they provide white light. The claimed overlapping emissions do not give white light.

Claim 17 is indefinite since it refers to canceled claim 11. It is suggested to delete the phrase "according to claim 11" from this claim to overcome the rejection. Claim 1, from which claim 17 depend, teaches in lines 10-11, "a pair of mutually associated additives".

Claim 12 is indefinite since it depend from both claims 1 and 6. It is suggested to delete the phrase "according to claim 6" from this claim to overcome the rejection since claim 6 does not define the doped host lattice. Claim 6 simply states that at least one additive is formed on the basis of a doped host lattice.

Applicants' argue that "complemented" has the dictionary definition which "something that fills up or complete" and then argues that is being used as the translation of the German word "erganzen" and that it refers to the fact that the emissions of the first and second additives overlap and this overlapping area is a new spectra. The argued definition does not have the same meaning as the argued fact. Using the argued definition, claim 1 teaches that the emission spectra of the second additive completely fills up or completes the emission spectra of the first additive. Thus there would be no overlap in emission between the first and second additives, but claims 1, 14, 16 and 23-25 all require an overlap. In light of the argued definition, claims 14, 16 and 23-25 do not make any sense since the argued definition require the emission spectra of both additives to be the same. It is suggested to define this phrase as was done in application 10/574,831 to overcome the rejection over this phrase.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-9, 12-19 and 21-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of copending Application No. 10/574,831. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the copending application are directed a coding composition comprising a first and second luminescent substance having a joint emission range outside the visible spectra range and a third luminescent substance which emits in the joint emission range, which reads upon the basic substance and the pair of mutually associated additives of claim 1 and a document comprising this composition. The joint range and substance compositions claimed in the co-pending application are those of claims 3-9, 12-16 and 22 and overlaps that of claims 19 and 23-25 of this application. Claims 15-16 teach the composition contains a plurality of pair of mutually associated additives and that they each have a different subrange, which suggests the subject matter of claims 17 and 18 of this application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants' comments with respect to this rejection are noted. This comment does not overcome the rejection and thus it is maintained.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5-8, 12, 14, 16-18, 20 and 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 4,013,490.

This reference teaches a coding composition comprising at least three luminescent substances. The reference teaches the phosphor of table II can be combined with the codes of tables III-IV, where the joint range is about 300 to about 700 nm. Thus it teaches a composition of calcium tungstate or manganese doped zinc silicate with the mixture of yttrium oxide activated with Eu and yttrium oxide activated Sm, which reads upon the composition of claims 5-8, 12, 14, 16 and 22-25, since the main emissions lines of Sm and Eu appear to be the same in figures 7 and 9. It also teaches compositions of calcium tungstate or manganese doped zinc silicate with mixture of yttrium oxide activated with Eu, yttrium oxide activated Sm, yttrium oxide activated with Pr and yttrium oxide activated with Gd. This composition reads upon the compositions of claims 17 and 18 with the yttrium activated Gd as the basic luminescent substance since calcium tungstate or manganese doped zinc silicate and yttrium oxide activated with Pr have an overlapping emission range in the joint emission range or 300-700 nm. Since the reference does not define the luminescent substances as a basic substance and additive substances, it reads upon the claimed composition of one basic substance and four additive substances and the claimed composition of two basic substances and two additive substances. The reference teaches the claimed system.

Applicants argue that the reference does not teach the claimed composition since the figures of the reference shows the emission spectra of the yttrium oxide doped luminescent

materials as discrete lines. This argument is not convincing, since as stated above, at least one of the lines overlap the lines of the other material and the emission spectra of figures 4-6 overlap the lines of figures 7-15. The statement in column 3, lines 1-12 does not overcome the rejection since the examples teach composition which teach that claimed. The rejection is maintained.

Claims 1, 3-5, 14-18, 20, 21, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 6,380,547.

This reference teaches an composition for securing, by tagging, value documents, such as currency or books. The composition contains three to five luminescent dyes which emit in the range of 550-650 nm, where the composition where two of the dyes have a joint emission range of 580-600 nm , 600-620 nm or 620-640 nm in the broad joint range of 550-650 nm (col. 3, lines 1-15). These composition suggest those of claims 5, 14, 16, 23 and 24. Since the reference does not define the luminescent substances as a basic substance and additive substances, it reads upon the claimed composition of one to three basic substance and two additive substances or one basic substance and two or four pairs of additives. Column 7, lines 50-59 teaches that the composition can also contain a plurality of luminescent dyes which emit outside the visible wavelength range, such as in the range of 700-1200 nm (col. 5, lines 50-56). This range falls within that of claim 3 and 4. The preferred number of dyes is at least three and even more preferable is at least five dyes (col. 8, lines 11-16) and figure 1 teaches five luminescent dyes that have an emission peaks or lines in the range 700-960 nm. These dyes include two pair of dyes that have overlapping emission ranges and the overlapping emission range of each pair does not overlap the other. One pair has an overlapping range of 890-930 nm, which falls within one of the ranges of claim 15. The reference teaches the claimed system and method of using the system.

Applicants argue that the reference does not teach the claimed composition since it teaches combining different luminophore to create a unique spectral signature in a predetermined region of the spectra, which is divided into subregions. This argument is not understood since the taught predetermined region of the spectra reads upon the claimed joint range and the reference teaches combinations of dyes that have overlapping emission spectra and that these dyes form a subregion, which reads upon the claimed subrange. Applicants argue that the overlapping spectra of the taught dyes is of a completely random nature but they have not provided any evidence in the reference to support this assertion. The reference teaches to select dyes so as to have the taught properties and figure 1 shows possible combination that can be used. The argument that the composition of the reference cannot be used as a coding is not convincing since the reference discussed the use of the composition as a signature to mark or tag articles which is the purpose of the claimed composition. The rejection is maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
December 2, 2009

/C. Melissa Koslow/
Primary Examiner
Art Unit 1793